

DESCRIPTION

Species Reactivity	Rat
Specificity	Detects rat IL-5 in direct ELISAs. In direct ELISAs, 50% cross-reactivity with mouse IL-5 is observed and no cross-reactivity with human, equine, canine, feline, or rhesus monkey IL-5 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 299257
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant rat IL-5 Met20-Val132 Accession # Q08125
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.	

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Neutralization Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Interleukin-5 (IL-5) is a secreted glycoprotein that belongs to the α -helical group of cytokines (1 - 3). Unlike other family members, it is present as a covalently linked antiparallel dimer (4, 5). The cDNA for rat IL-5 encodes a signal peptide and a 113 amino acid (aa) secreted mature protein. Mature rat IL-5 shares 70%, 94%, 56%, 63%, 59% and 59%, aa sequence identity with human, mouse, canine, equine, feline and porcine IL-5, respectively. IL-5 is primarily produced by CD4+ Th2 cells, but also by activated eosinophils, mast cells, EBV-transformed B cells, Reed-Sternberg cells in Hodgkin's disease, and IL-2-stimulated invariant natural killer T cells (iNKT) (1 - 3, 6 - 8). IL-5 increases production and mobilization of eosinophils and CD34+ progenitors from the bone marrow and causes maturation of eosinophil precursors outside the bone marrow (1, 6, 9, 10). The receptor for human IL-5, mainly expressed by eosinophils, but also found on basophils and mast cells, consists of a unique ligand-binding subunit (IL-5 R α) and a shared signal-transducing subunit, β c (3, 6, 11). IL-5 R α first binds IL-5 at low affinity, then associates with preformed β c dimers, forming a high-affinity receptor (12). IL-5 also binds proteoglycans, potentially enhancing its activity (13). Soluble forms of IL-5 R α antagonize IL-5 and can be found in vivo (10, 14). In humans, IL-5 primarily affects cells of the eosinophilic lineage, and promotes their differentiation, maturation, activation, migration and survival, while in mice IL-5 also enhances Ig class switching and release from B1 cells (1 - 3, 9, 10, 15, 16). IL-5 also promotes differentiation of basophils and primes them for histamine and leukotriene release (17).

PRODUCT SPECIFIC NOTICES

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